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WHETHER CHOLERA IS CONTAGIOUS.

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By JACOB BIGELOW, M.D.

WITHIN the present century, cholera, a disease indigenous in hot climates of the East, has, at various intervals, made its appearance in the temperate latitudes of Europe and America. It is now again exciting interest from its possible and perhaps probable approach to this country.

The experience of the last thirty or forty years has led a majority of medical men who have observed the disease to believe that, as a general law, it is not contagious. In this belief I must individually remain, until evidence more satisfactory than any which has yet appeared shall justify an opposite conviction.

The great epidemics of 1830 and 1847 had a remarkable coincidence in the path which they pursued, and in the order and dates of their arrival in different cities. They seem to have followed certain great routes of travel, and to have avoided others equally frequented. According to Leségue, they both visited consecutively, and in corresponding months, Tiflis, Astrachan, Moscow, Petersburg and Berlin. In 1831, cholera did not take the most frequented route from Berlin to Paris, but passed along the shores of the Baltic, crossed over to Sunderland, went down to London, and again crossed the channel and arrived in Paris about six months after its appearance at Berlin. A disease propagated by contagion of any kind would hardly have avoided the most frequented thoroughfares from Berlin to Paris, while it occupied half a year in going round by England.

The epidemic now or lately prevailing in Europe appears to date back at least nine months, at which time it existed among the caravans of pilgrims visiting or returning from the city of Mecca. In the middle of May last it was at Alexandria and Cairo, in June at Constantinople, Ancona and Marseilles, and in November at Paris, Havre and other European cities.

Thus it appears that cholera has now existed in Europe from three

to eight months, among cities having constant commercial intercourse with seaports of the United States, during which time thousands of passengers and tens of thousands of bales and packages have been landed in our maritime cities. If cholera were as contagious or portable as many believe it to be, it ought to have begun and perhaps finished its work in many of our seaports before this time.

Epidemics require two things for their introduction and extension. These are—first, predisposition in the inhabitants of the place visited; and, second, the arrival or presence of an exciting cause. This cause in some epidemics, such as smallpox, is contagion. In others it is an occult influence, not yet discovered nor understood, nor known to be controlled, except in some instances, by hygienic agencies. No country, I believe, has succeeded in keeping out cholera by quarantines, and no country, as far we know, can produce it artificially or retain it after the predisposition has disappeared. In its own time it moves on thoroughfares where men are travelling, and spreads in cities where they are stationary, for no better known reason than that mankind are its necessary food, and that where there are no people there can be no cholera. But why, of two frequented roads or cities, it selects one and avoids the other, investigators have not yet been able to satisfy us.

The credit of having introduced the present epidemic into Europe, is by a sort of popular acclamation assigned to the hosts of squalid devotees who perform an annual pilgrimage to Mecca. Yet we are told that "the cholera exists every year among the caravans of Musselmans arriving at the holy cities," so that their supposed mission of forwarding the cholera to Europe, in most years fails to be performed.

Cholera, like influenza and some other migratory diseases, has usually but not always advanced from east to west. Of the vehicle in which it travels, or the course it is next to take, we know about as much as mankind knew of the cause of lightning before the discovery of electricity. Its conveyance and propagation have been ascribed to air, to water, to material foci, to electricity, to ozone or to the want of it. Of late, in consequence of the vast development by the microscope of the existence everywhere of minute living organisms, it has become more common to ascribe the arrival of this and other like epidemics to certain unseen "germs" which are called seeds or ova, cryptogamic or animalcular, according as the fancy of the theorist inclines him to adopt a vegetable or an animal nomenclature.

But in this, as in many other cases, it is easier to trace an analogy, or to assume a cause, than it is to prevent an effect. Although inquirers have been indefatigable in their attempts to enlighten the world on the means of ridding ourselves of the presence of the various offensive cotenants of our globe, yet no crusade has yet succeeded in banishing from our fields and houses the unwelcome swarms of

mosquitoes, worms, grubs and flies, which molest us with their annual presence; nor in suppressing the blight of grain, the potato rot, or the peach-tree disease. Happily some, if not most of these have their periods of abatement or disappearance, and this rather through the order of Providence than the agency of man. Cholera seems to abide in the same category. We know little of its exciting cause, and not much of its prevention, except that by following in our personal habits the dictates of reason and experience, we diminish both the frequency and danger of its occurrence.

Whatever may be the cause or vehicle of cholera, credulous and excitable persons are impatient of suspense, and are prone to cut a knot which they fail to untie. When an epidemic disease first appears, some coincidence is always brought to light which is supposed capable of accounting for it. The arrival of a ship, the opening of a trunk or the washing of a garment, are among the most frequently accepted causes. But as these events have happened a thousand times before, and apparently under like circumstances, without any known results, it has been thought necessary by some of our later writers to narrow the compass of actual exposure down to the reception of the morbid excretions of one individual into the digestive canal of another. The first impression made by this announcement must, if true, be one of relief, the danger not seeming likely to happen very often. But to the possibility of such danger we can never oppose an absolute negative, so long as we persist in eating smelts and flounders caught about the mouths of our drains, or even turnips, salads and strawberries raised at Brighton. The risk, however, is so small, that most persons will prefer to take it, rather than to deprive themselves of food or luxuries.

Of the many sensation tales printed and reprinted about cholera, and the supposed instances of remarkable communication or arrestation, it is sufficient to say that they are frequently interesting, being fully as dramatic as they are probable.

In the same regard we cannot help noticing that credulity, and perhaps private cupidity, have caused much stress to be laid on the supposed preventive efficacy of what are called "disinfectants," a mysterious word which implies a thing assumed but not proved to exist. We have deodorizers, such as chlorine, charcoal, &c., which by their combinations render certain effluvia imperceptible to our senses. But that these are not *disinfectants*, there is most abundant evidence. The narrative, then, of the physician at Malta, who covered certain surfaces in vessels with oil, and had them "disinfected by chlorine gas," after which "no new cases occurred," is to be classed with other like results, with which the medical press always abounds at the close of epidemics.

In clean and well-regulated cities of temperate climates, cholera is far from being the most formidable of epidemics. A greater part of its victims are the miserably poor, the worn out, the ill provided, and

the intemperate, in whom this disease only anticipates the date, but does not greatly increase the annual or biennial number of deaths. Its mortality in our northern Atlantic cities rarely amounts to one per cent. of the population in a given place or year, so that a man may reside through an epidemic in one of these cities with less risk than he can take a pleasure voyage to Europe. After having witnessed many cases of cholera in this and other cities, I am farther satisfied that it affords one of the easiest modes of exit from the world.

People who would avoid or prevent cholera should cultivate equanimity, regularity of life and habits, cleanliness, salubrious exercise, temperance, and avoidance of all excesses. When they have done their duty in providing for the care of the sick, allaying public panics, and abating public nuisances, they may safely dismiss their apprehensions. Little good and some harm is always done by the indiscreet agitation of a subject which is to a great extent beyond our control. A single or sporadic case of cholera occurring in a village of a thousand inhabitants may attract little notice, and perhaps pass without record; but a hundred cases in a city of a hundred thousand inhabitants make an aggregate which generally causes some panic, though the proportion is exactly the same, and the panic equally unnecessary. It is possible that the supposed immunity of country districts in comparison with cities may be accounted for by the fact, that in the sparse population of country towns cases are less liable to be detected and published.

I may be excused for repeating the following remark from among some "Aphorisms" published by me about thirty years ago, when the disease was new and little known among us. "Should the cholera continue to prevail for three years throughout this continent, it would cease to interrupt either business or recreation. Mankind cannot always stand aghast, and the wheels of society at length would be no more impeded by its presence than they now are by the existence of consumption, of old age or of drunkenness."

CASES FROM PROF. GREENE'S CLINIC—BERKSHIRE MEDICAL COLLEGE.

[Reported by FRANK S. ABBOTT, M.D., Clinical Clerk, and communicated for the Boston Medical and Surgical Journal.]

CASE I.—*Morbus Coxarius.*—Mary C., aged 4 years. Was always healthy until about eight months ago, when she began to complain of pain in the left knee, limped a little, was restless and oftentimes feverish at night; lost appetite, flesh and strength. For the last three months has not walked at all, or at least has borne no weight on her limb. For the last four or five months she has complained more or less of pain in the hip, but not severe. She is now

pale and emaciated. On examination of the affected limb, it was found smaller than the other, and apparently longer than its fellow. Upon measurement, however, there was no difference. Absence of swelling or tenderness, and freedom of motion at the knee, excluded that joint as the seat of the disease. Deep pressure over the *ileo-femoral* articulation gave her great pain. The muscles about the hip were wasted, giving it a flattened appearance, and the ileo-femoral line was almost entirely obliterated. Pressure on the sole or at the knee gave her much pain. Upon carefully questioning the mother, she remembered that about eight months before, while running, she fell and cried, "Oh mother, I have hurt my hip," but was soon at play again as before.

Prof. G. remarked that this was a typical case of coxalgia. The early pain in the knee, without other evidences of inflammation—this being merely a reflex symptom, and one of the most prominent in the early history of this malady—the marked constitutional disturbance at this time showing that some important organ was suffering, the gradual accession of pain and tenderness at the hip, the flattening, the pain upon pressing the caput femoris against the acetabulum, all pointed unequivocally to the nature of the disease. The elongation of the limb was merely apparent and not real, as ascertained by measuring from the superior spinous process of the ilium to the malleolus. It occurs from the tilting of the pelvis, and it is doubtful if the elongation spoken of in the books as the result of intra-capsular effusion ever *really* exists. One point should be especially noted here, namely, the *reported fall* of the child about the time the disturbance of its health was first noticed. Dr. G. said that in a majority of the cases he had seen, some such testimony would be elicited, provided the attention of the friends *was called to it*, and there was no doubt in his mind that in a very great proportion of these cases the disease was local in its origin. The idea generally entertained was that coxalgia was merely the local expression of a constitutional fault, which was generally a tubercular diathesis. It is true that these inflammations are most likely to occur in scrofulous subjects, in whom a very slight local injury may awaken serious organic changes; and it is true that inflammation established in the joint of such a person will, uncontrolled, give rise to exudations more or less nearly allied to tubercle; but without arguing the question at length, one single fact was almost sufficient to settle it, and that was, that if by any means the pressure and friction between the opposing surfaces was removed, both local and constitutional symptoms were relieved; and, if taken early, the *great majority* of patients would recover without *any other treatment.*

This, then, was the great indication in this case. Apply a Sayre's splint, making sufficient extension to separate the head of the bone from the acetabular surface. There is not sufficient contraction of the muscles to prevent this; if so, we should tenotomize them. She

will then be free from pain, will sleep quietly, and as soon as she is accustomed to the instrument will walk and run with ease, inasmuch as the weight of the body is now upon the perinæum. She is to have also syrup of iodide of iron, a good, nourishing diet, and to be kept as much as possible in the open air.

The splint was applied, and in six weeks the child came walking easily into the clinical room, looking rosy, and complaining of no pain. Six months later, the splint was discontinued, she having perfectly recovered.

CASE II.—*Encysted Tumor.*—John G. has a swelling just over the parotid gland. The fact that the tumor is movable, circumscribed, painless, fluctuating, and has been three years growing, and that the general health is unimpaired, is sufficient to warrant the diagnosis of simple encysted tumor.

A simple incision was made down to the sac, which was enucleated without difficulty. Wound healed by first intention.

CASE III.—*Carcinoma Uteri.*—A. S., aged 55, unmarried. Had one child when sixteen years old; none since. Has had repeated attacks of pneumonia and pleurisy within fifteen years, to relieve the effects of which, as she says, she has worn a seton in the chest for ten years constantly. Says she had "ulceration of the womb" five years ago, which was cured by local treatment. A year ago, began to suffer pain through the pelvis, which has come to be very severe, often of a lancinating character. It is aggravated in urinating. Occasionally a slight bloody discharge. General health fair. An aunt and two sisters died of cancer. Prof. Green said, we might have here either an inflamed or displaced uterus, or some morbid growth involving the neck or the body of the organ. If the latter, it might be benign or malignant. If benign, the *probabilities* in this case would be that it was a submucous, fibrous tumor, but the history of the case pointed strongly to cancer. We were not, however, to make a diagnosis until we had made a *thorough* exploration of the parts. The same rule should guide us as in examining other parts of the body, to wit: *possess yourself of all available evidence.* Without this critical examination and thorough analysis of his case, no man can be an *accurate and reliable* diagnostician or therapeutist in the surgical diseases of women.

The patient was taken to the ante-room and examined. Sound passed into the uterus, which measured 3½ inches; the anterior lip nodular and of stony hardness, and whole anterior wall of cervix blended with posterior wall of bladder. Thus the case is clear as one of carcinomatous uterus.

Treatment.—Live well; take tinct. ferri muriatis, twenty drops, after each meal; two grains of conium at night to relieve pain, and continue to wear the seton. The discharge from it is to a certain extent eliminative, and may have quite an influence in retarding the progress of the malignant disease.

[To be continued.]

USE OF THE MICROSCOPE AS A MEANS OF DIAGNOSIS.

[Read before the Berkshire District Medical Society, December 27th, 1865, and communicated for the Boston Medical and Surgical Journal.]

By Frank K. Paddock, M.D., Demonstrator of Anatomy in Berkshire Medical College.

Gentlemen,—Very little was known of the microscope as it is now made until the latter part of the sixteenth century. For a long time previous to this period single lenses had been constructed and used quite generally, but the combination of two or more lenses in form of a compound microscope was not effected until the simple magnifying glass had been exhausted of its powers of revelation and capability of improvement.

The first compound microscope was constructed before the seventeenth century, and although since then a very large number and an almost infinite variety have been invented, they may all be classified under two general heads—viz., the simple, and compound microscopes—the essential difference between them being, that with the simple microscope, of which you have an example in the common pocket magnifier, the object examined is itself seen enlarged by the convergence of rays of light passing directly from it to the eye, and may consist of one or more lenses; whereas the compound microscope must in all instances possess two or more lenses, one of which receives the rays of light reflected from or transmitted through the object, and with them form a magnified image that is viewed through the remaining lens, instead of the object itself. All other differences in microscopes have reference to the arrangement of, and facilities for using these lenses.

Many and great were the difficulties the early microscopists had to overcome, even after the principle of the compound microscope was discovered, before they were able to construct one that would accurately magnify minute objects. Perhaps one obstacle to their advancement was an incorrect idea of the microscopical appearance of objects which they had never distinctly seen nor heard described. But by far the greatest difficulty was the correction of the spherical and chromatic aberration of the lenses.

The comparative value of all microscopes depends upon the distinctness with which they define the outline of objects. The compound microscopes first constructed defined the central portion of an image tolerably well, but towards its circumference a dimness and indistinctness of outline became apparent that destroyed the character of the object. This was in consequence, as subsequently proved, of the spherical aberration of all convex lenses; so called because the rays of light transmitted by the circumference of such lenses do not meet at the same focus with those that pass through their centre, and thus produce an indefiniteness of outline. This difficulty was finally remedied, after years of experiment, by passing the rays through a concave lens also, which, although it diminished the power of the convex lens, completely corrected the spherical

aberration, and produced an image whose outline was as distinctly defined as its centre.

After this improvement had been made, it was found that while the image of the object was well defined its color was varied, in consequence of the unequal refrangibility of the colored rays that compose white light, the lenses acting the part of a prism, bringing the violet rays to a focus at one point, the red at another, thus producing all the colors of the spectrum. To correct this chromatic aberration, two varieties of glass were employed, viz., the flint and crown glass—the aberration of one just counterbalancing that of the other. A combination of this kind was first made by a French microscopist in the year 1823, forming an objective free from either spherical or chromatic aberration, which is called the achromatic objective. Since that time other but minor improvements have been devised and additions made to the microscope as originally constructed, so that nothing further seems to be demanded of it in the present state of science to make it a perfect instrument.

Of all sciences, medicine is undoubtedly the most indebted to the microscope. The mysteries which detained the world in its progress from ignorance to wisdom that have been solved in the last twenty-five or thirty years, without it would still have remained for the future to develop. The intimate knowledge of histology possessed by the anatomist of to-day must still have been wanting, and the diagnostician would yet be obliged to speculate about the pathology of diseases which his unassisted eye could never interpret.

In the early history of the microscope, when it was first employed in the study of the minute structures of the body, and during the infancy of microscopical anatomy, it fell into considerable disrepute in consequence of the variety of descriptions that different eminent anatomists gave of the same tissue. One, for instance, said that the human blood corpuscle is spherical, another contended that it is a circular disk with slightly concave surfaces, and still another described it as a circular disk, like a piece of money flattened upon its sides, having a granular or rough exterior. This discrepancy of opinion was not owing to a want of accuracy on the part of the observer, nor to any fault in the instrument, but simply to the different conditions under which the blood was examined. It has now long been known that the human blood corpuscle is a circular disk, about $\frac{1}{3200}$ of an inch in diameter, having a slightly biconcave surface if examined when first taken from the body, but if allowed to come in contact with water losing its biconcavity and becoming globular from imbibition. On the contrary, if it is permitted to remain in the air a short time, a portion of the water normally contained in the corpuscle evaporates, leaving its circumference wrinkled and shrivelled. All of these appearances of the corpuscle can sometimes be seen in a single field under the microscope, when water has been added to one portion while the remainder is drying.

Similar misrepresentations of the microscopic appearances of nearly all the tissues were made, before all of the different conditions and circumstances attending their examination were fully recognized and a perfect description of their normal appearance permanently made out.

Another reason why the microscope suffered in reputation was because it failed to meet the expectations of the most enthusiastic. The signs of disease which the microscope furnishes are not *per se* of very great value; it is when taken in connection with other abnormal conditions that they afford the physician the most assistance. The microscope does not create, it merely developes for our observation and study that which would without it exist in forms too minute to be seen with the unaided eye. The microscopists who at one time claimed that with the microscope alone they could positively diagnosticate disease, were necessarily disappointed; and in consequence of its failure to perform all they declared it would, they would exclude it altogether in forming a diagnosis. It is enough to know that it will aid in establishing one, to commend its use to me.

The microscope has been supposed to give us the power to decide between malignant and benign growths, but as yet it comes far short of this. It was found by microscopical examination that some cancerous growths contained in the fluid, or, as it is called, the cancer juice, which exists in the stroma, irregularly shaped cells, having usually two or more nuclei. These cells, being unlike anything then found in any other tissue, were supposed to be pathognomonic of malignant growths, and the sweeping assertion was made by eminent professional men that their presence in any abnormal structure was conclusive evidence of its malignant character, and any tissue that did not contain them must be considered of a benign nature; so that the decision between malignant and non-malignant growths was to be determined only by the microscope. Its subsequent failure to do this occasioned a distrust of its accuracy, but not justly, however, for it has since been proved beyond controversy that these same cells exist in some growths that exhibit none of the other characteristics of malignancy; and, on the other hand, tumors are almost daily examined, whose malignant nature is not only evidenced by their symptoms but by their fatal result, that are entirely destitute of these cells.

In illustration of this fact, I show you a stomach, obtained *post mortem* from the body of a patient who died with well-marked symptoms of gastric cancer. The walls, you will notice, are completely infiltrated with a scirrhous deposit, producing great thickening and contracting the cavity of the organ to less than one fourth its normal size. No cancer-cells have been found in the exudation, although carefully examined with the microscope, notwithstanding there seemed to be sufficient reason to expect them. Yet, if found, they would have been merely a positive sign, and of no value negatively.

Within the last few years more of the real nature and true pathology of renal diseases has been discovered through the agency of the microscope than was ever known of them before; and it is in their diagnosis that the microscope is chiefly valuable to the profession.

"Bright's disease" is just about as fatal as pulmonary phthisis, and I think I am justified by the experience of professional men when I say that it is quite as common. Formerly this disease was not diagnosticated in its incipient stage, and the early symptoms were treated without reference to the pathological conditions they indicated. As soon, however, as albumen was detected in the urine, the nature of the malady was supposed to be established, and remedies were administered accordingly; but usually by this time the disease had made too much progress to be checked.

In the very early stage of Bright's disease, even before there is sufficient albumen in the urine to be detected by either heat or nitric acid, there may usually be found, and I think always if proper measures are instituted in a careful and persevering microscopical examination, uriniferous casts. Of these casts there are three varieties, their difference depending upon the condition of the uriniferous tubules. When these are formed, as you know, in an inflammatory state of the kidney, they are produced by the coagulation of fibrin which has exuded through the walls of the bloodvessels; they then pass off with the urine, retaining the exact shape of the tubuli, and usually having attached to their surface more or less of the secreting renal cells that line the surface of each tubule. When examined with the microscope, they have the appearance of cylindrical bodies of variable lengths, covered with epithelium, and are consequently called uriniferous epithelial casts.

These cells, after having once been taken off by the fibrinous cast, will form again, just as epithelium does in other situations; this process of reforming and casting off these cells may continue a certain length of time without injury to the kidney, but if the inflammation continues long unabated, the cells will finally cease to be reproduced, and albumen will be exuded through the walls of the bloodvessels into the urine, replacing the secretion of urea.

And now another kind of casts is formed, which are larger than the first variety, and, being destitute of epithelium, are called from their transparency hyaline casts. In fatty degeneration of the kidney these latter casts are covered with granules of fat, which are more or less imbedded in their surface, in place of the epithelium of the first variety, and are called either granular or fatty casts.

In regard to the relative frequency of these three varieties, the epithelial are by far the most common, the granular next in order, and the hyaline the most rarely found, besides being from their transparency very difficult to study, even when present in considerable numbers. Not infrequently all of these varieties are present in the

same specimen of urine, owing to a progressive inflammation from given point.

Taken separately, the epithelial variety indicates a recent inflammation; the granular, inflammation co-existent with fatty degeneration; the hyaline, an inflammation of long standing, and usually attended with an abundance of albumen in the urine.

Blood and pus corpuscles are often found adhering to the casts and render the diagnosis more complete, but they do not necessarily indicate hæmorrhage or suppuration in the kidney, for they may come from any of the urinary passages.

If recognized in its early stage, Bright's disease, with proper treatment, is not infrequently checked; but after albumen begins to make its appearance and the large variety of hyaline casts are present in abundance, pathological changes have obtained that can never be removed, and whose progress is rarely even interrupted. Hence arises the great necessity for an early diagnosis of this fatal disease.

The urinary crystals afford the microscopist a very pleasant study, although a knowledge of their characteristics is not of any great importance to the pathologist. Spermatozoa are not infrequently found in urine, and afford the imagination almost unlimited scope as to their structure, physiology and function.

In illustration of the novel uses to which the microscope may be applied by the physician, the following little incident is submitted.

In one of our New England cities, not long since, a physician was treating a patient for uterine disease, and he found it necessary to prohibit any indulgence in sexual intercourse for a certain number of weeks, stating at the same time the reasons why it would be injurious. The patient comprehended apparently the necessity of the case, and remarked that she "would endure with pleasure anything that would hasten convalescence." She came to the office one morning, however, presenting, upon examination, sufficient evidence of coition to arouse the suspicions of the physician, who, without any remarks, secured a little of the vaginal mucus upon a piece of cotton and quietly examined it with the microscope, and found it alive with wriggling, squirming spermatozoa. The astonishment and chagrin evinced by the patient can easily be imagined when the doctor mentioned her delinquency, and decidedly informed her that unless she was conscious of a moral obligation she would be obliged to seek other counsel.

The value of the microscope to the profession can only be appreciated by those who use it and know practically something of its power and range of application; and I am certain that ere long its importance will be recognized by all, and that it will be used as generally as is the stethoscope.

Bibliographical Notices.

Circular No. 6. War Department, Surgeon-General's Office, Washington, November 1, 1865. *Reports of the Extent and Nature of the Materials available for the preparation of a Medical and Surgical History of the Rebellion.* Printed for the Surgeon-General's Office by J. B. Lippincott & Co. Philadelphia. 1866. 4to. Pp. 166.

That half of the above work which relates to the surgical history of the war was noticed in a late number of this Journal. We propose to treat in the same manner that which relates to the medical history.

As the title implies, the Circular is merely a kind of courier intended to announce the advent of the more important work, which is to be issued at some future time. Of the value of this we can form some opinion from the excellence of the summary before us. In this we are told that

"The matter collected is partly statistical, partly pathological. The first category embraces the medical history of the several armies and general hospitals. The second consists of a number of memoirs and reports by medical officers on the causes, symptoms and treatment of the more important camp diseases, of numerous histories of cases and autopsies, of the fine series of medical and microscopical specimens in the Army Medical Museum, and of the results of the pathological studies conducted . . . . . on the basis of these collections. In addition there are a large number of descriptions and plans of general hospitals, of reports on hospital organization, and some other miscellaneous matters."

Vast as is the accumulation of statistics, much less is determined by them than could be wished, and it is difficult to see how the result could be otherwise. The rush of inexperienced men to the field was incompatible with that knowledge of military routine necessary for accurate records, even had all the medical officers been sufficiently skilled in their profession to enable them to diagnosticate properly the diseases presented to their observation. It must also be remembered that physicians skilled in civil practice were obliged to confront maladies entirely different from those peculiar to the localities from which they came, or so modified by change of circumstances as hardly to be recognized. The necessity of filling inflexible blanks has also secured for an immense number of obscure diseases names not in the slightest degree applicable to them. The only refuge for the unfortunate surgeon who was unwilling or unable to commit himself to some precise diagnosis, was found under the head "other diseases of this order," the "order" being frequently based upon some fanciful idea of the *nature* of disease, infinitely more abstruse than the disease itself.

Thus, in the year ending June 30th, 1862, there were reported 7,449 cases the nature of which was so obscure that no diagnosis was made, and yet they appear under the head of miasmatic diseases, of which so long a list precedes them as to make it somewhat difficult to imagine how they could be excluded if they belonged there at all. We think, too, that some who cherish lively recollections of their

campaigns during the same period will be surprised to learn that the only parasitic disease known in the army was "worms." Itch, the statistics say, did not make its appearance until the following year. Notwithstanding the rarity of "inflammation of the stomach" in civil practice, 2,556 cases are reported among the soldiers in one table, and 3,762 in another.

We do not intend in any way, by these remarks, to reflect upon the author of the report. He was obliged to use such materials as offered themselves, and he has used them most judiciously. He recognizes the errors caused by mistakes in diagnosis, negligence, omissions and falsehood, but, at the same time, does not consider "that they are sufficiently numerous and important to rob the medical statistics of our army of their practical value."

We may certainly admit the correctness of some general conclusions, such as the excess of mortality from disease over that from wounds, the preventable character of the diseases themselves, the good health of the troops compared with that of the Allies during the Crimean war, and the influence of season and locality upon certain diseases.

The complicated nature of what is called camp fever is well shown in the pages devoted to that subject. There are included under the general designation of camp fever "all those cases which were reported during the first year of the war under the heads of typhus, typhoid, common continued and remittent fevers, and, during the second year, under the heads of typhus, typhoid, typho-malarial and remittent. This grouping is by no means intended to express a doubt as to the propriety of regarding typhus, typhoid or enteric and remittent fevers as distinct affections. But as the diseases have occurred in our army during the present war, the phenomena of these (two) affections have continually complicated each other in the same patient."

Much valuable information is given in regard to the character of the lesion in chronic diarrhœa and dysentery, the microscope having been applied in a masterly manner. As a remedial measure nothing seems to have exerted so much influence as climate, the number of the deaths varying with the latitude of the hospitals in which the patients were treated. Thus, the proportion of deaths in the hospitals of New England was one in forty-nine; in those of New York and New Jersey one to nineteen; in those of Pennsylvania and Delaware one to fifteen; in those of Maryland and the District of Columbia one to eleven; in those of Fortress Monroe and on the coast of North and South Carolina one to seven. This fact was recognized at the Surgeon-General's Office, and acted upon as far as the exigencies of the service would allow. Concerning the efficacy of drugs, the usual diversity of opinion exists. Acting Assist. Surgeon J. B. Trask, in speaking of the use of subnitrate of bismuth, says: "In not a case of the two hundred and seventy treated at the Finley Hospital during the period named and by this agent, was there a failure in promptly and radically arresting the disease, when given in the quantities and at the time stated." Influenced by this and similar reports, Dr. Woodward "tried the remedy quite extensively, and was cognizant of its use in a large number of cases of both acute and chronic diarrhœa. It generally showed itself a most valuable agent. In a few

cases, however, tormina, tenesmus and other dysenteric phenomena, with an aggravation of all the symptoms, followed its use, and in a very considerable proportion of the chronic cases it appeared to be wholly without effect. The subsequent experience of many surgeons in the field and in hospital gave similar results."

The prevalence of other diseases and their character are also spoken of, but we must reserve the brief space remaining for the Army Medical Museum, where there are preserved about seven hundred specimens, which illustrate the prevalent diseases of which the pathological anatomy is appreciable. The various lesions of camp fever are illustrated by one hundred and sixty specimens. The changes in diarrhœa and dysentery are shown in two hundred specimens, some of which have been drawn and beautifully colored while in a fresh state. But the greatest results have been attained in the microscopical department. Dr. Edward Curtis has succeeded in making preparations which show the ultimate changes of structure, and, although certain results are only alluded to briefly, it is evident that we can now boast of as thoroughly scientific laborers upon this side of the water as can be shown in Germany, where the most important steps have been taken. We await with impatience the appearance of the promised volumes, which we have every reason to believe will contain observations which will compare favorably with those of the school of Virchow, and throw light upon the nature of certain forms of disease, for the study of which we have enjoyed the sad privilege of most unexampled opportunities. The success obtained in the application of photography to the microscope may well excite our pride, as much higher powers have been used than were previously thought practicable.

If the more complete work of which this is a synopsis answers our expectations, it is clear that the medical history of the war will be a credit to the country and all concerned in its production.

Rhinoscopy and Laryngoscopy; their Value in Practical Medicine. By Dr. Friederich Semeleder, Physician in Ordinary to the Emperor of Mexico, &c. &c., formerly Member of the Medical Faculty of the University of Vienna, &c. Translated from the German by Edward T. Caswell, M.D. With Wood-cuts and Chromo-lithographic Plates. Pp. 191, 8vo. New York: William Wood & Co. 1866.

The publication of this book is most opportune, at a time when many of our zealous young practitioners are training their eyes and hands to the somewhat difficult practice of the two methods of direct examination of parts heretofore beyond the reach of visual exploration. It contains the substance of two separate monographs by the author, nothing of either, however, being omitted which is not a repetition of something in the other.

The author gives a sketch of the history of Rhinoscopy and Laryngoscopy, and this is followed by a full description of the different kinds of apparatus employed in each and the manner of using them. A subsequent chapter under each head treats of the practical application of these new methods of exploration, introducing numerous interesting cases. The illustrations are intelligible enough, and so far answer the purpose for which they were intended, but cannot be said

to do much credit to the engraver. A full bibliographical list of works pertaining to the subject, more than half of which has been supplied by the Translator, is a very valuable appendage to the work. As a whole, we would commend it most highly to all interested in the new field of observation and practice of which it treats. It is very well printed.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, MARCH 1, 1866.

THE MASSACHUSETTS GENERAL HOSPITAL.

Among the many noble qualities of our people which the war of rebellion has developed or revealed, none has been more conspicuous or will remain longer in remembrance than that noblest of all Christian virtues, charity. To self-sacrifice, daring, endurance and resignation, which united have hitherto expressed the highest meaning of patriotism, we have added another quality—that of unlimited and untiring benevolence, and the record of the Sanitary and Christian Commissions will form almost as bright a page in our national history as our long roll of honor. In New England we may fairly say this was no new trait, created by the excitement and necessities of war: it was but the diversion from old channels of a spirit of public generosity, which had founded and sustained universities and hospitals and libraries, only enlarged as the grander object of an imperilled republic demanded. And now that we may again devote the best of our energies and resources to the interest of these institutions of our own creation, it will not surprise us to find that they have suffered during the war, or that they now ask for the continuance of that assistance, upon which for the last few years they have felt that they had but a secondary claim.

Among these objects of home charity we know of none which has a higher claim, not only upon this community but upon all New England, than the Massachusetts General Hospital; for there is scarcely a village, however small, in any of its States, which has not felt in the person of some of its inhabitants the direct benefit of its scientific skill since its foundation. It is not our present purpose to say anything further of its claims, for they are very forcibly and simply stated in the letter of the Trustees, a portion of which we publish below; nor do we think it necessary. It has always been liberally supported, and we do not doubt that a fund will now be raised which will pay its debt and relieve its present wants, and enable it also to carry out fully the noble purposes for which it was founded. The past years of struggle and more recent events have shown that it needs but some act of heroism, some sudden calamity attended by suffering to stir a fever of charity within us. Let us not forget that the same necessities are always present though hidden amongst us, and that what is contributed now and on reflection will relieve more actual suffering than those impulsive outpourings in behalf of some temporary claim.

There is a duty, however, for us as a profession to perform. We have

as students received a part of our education within its walls, and although we may not be able personally to contribute to its support, we can do much by making its wants and claims known to our patients who have the means to give, and we should not omit a single opportunity of using our influence in this direction. The Trustees are now actively engaged in soliciting subscriptions, and contributions may be sent to the Chairman of the Board, Henry B. Rogers, Esq.

"The Trustees of the Massachusetts General Hospital respectfully beg leave to call your attention to the following facts and statements.

"This Institution, with the exception of a similar one in the City of Philadelphia, is the oldest establishment of the kind in the country—it having been incorporated in 1811, more than half a century ago. During the first year of its history it received substantial aid from the State, but, with this exception, it has been wholly indebted to the voluntary contributions of citizens of Boston and other neighboring towns, for its successful foundation and its subsequent support and enlargement.

"Among these contributions have been many munificent subscriptions, donations, bequests and devises which have not only done honor to the charitable dispositions of the parties who made them, but are valuable evidences of the just appreciation in which it has been held by some of the wisest and best men among us for a period of fifty-five years. Indeed, there can be no doubt that this Hospital has been eminently useful to this Commonwealth and to the country generally. Its early establishment undoubtedly had a powerful influence in inducing the formation of similar Institutions in all the large cities of the land, and these have generally looked up to it as their model, and, in their organization and discipline, have, more or less rigidly, adopted the principles and rules which it originated. Since its foundation more than twenty-five thousand sick or disabled men and women, resident in Boston, or other towns within the Commonwealth, have been admitted to its wards, and all of them have received the best medical and surgical treatment and the most tender and careful watching that could be obtained. Whatever, in food or other appliance, would contribute to relief, or recovery, has at all times been supplied. Its medical and surgical officers have always been men of acknowledged rank. One of them, the Nestor of his profession, the venerable Dr. James Jackson, and another, his coadjutor, the late eminent Surgeon, Dr. John C. Warren, both of whom, indeed, may be said to have been among its principal founders and to have given to it the high reputation which it has since enjoyed; were respectively its daily Visiting Physician and Surgeon, the one for twenty, and the other for thirty-six, years. The example set by these distinguished men has in later years been followed by many of their co-laborers and successors. Many hundreds of medical men throughout the country, who, in the past or the present, have acquired eminence in their profession, have owed their celebrity, in great measure, to the instructions given in its lecture rooms or its wards; and not a few of them have been practically trained in their duties by a year's service as House-Physician, or Surgeon. Indeed, it is just to say that the profession generally is indebted for its present high standard of excellence, in no inconsiderable degree, to this hospital, and that without its influence the community would not have been able to attain the science and

skill, in the treatment of medical and surgical cases, that it now enjoys. The value and necessity of such an Institution, therefore, cannot be called in question. It constantly affords relief and care to large numbers of sick or disabled persons, who otherwise must suffer or perish; and, at the same time, it educates the profession, and raises the standard of education within it, upon which, in cases of sickness or accident, all men must rely.

"As has been remarked, the Hospital, in times past, has received many large gifts from the public. The greater portion of them has necessarily been absorbed in lands and buildings that are essential to the protection and comfort of the patients, but yield no income; and the remainder has been expended in carrying on the establishment from year to year, or invested in permanent funds. The amount of these funds at this time is $230,389.03, and in most cases, by direction of the donors, the principal cannot be used, and the income is restricted to the support of free beds. From these resources, and the occasional payment of board by the patients, the Hospital has generally been able to sustain itself, though every now and then falling behindhand and relying upon the generosity of the public in the future to defray the deficiencies of the past. For some years past this deficit has become chronic, and within the last six or seven, owing to the smaller amount of contributions received, the constantly advancing price of labor and of articles of consumption, and the increased demand for free beds among the poorer classes, it has gradually swelled till, at length, it amounts to the gross sum of $86,698.17.

Such a condition of things awakens serious apprehension, and cannot consistently be suffered to continue. The only adequate remedy for it, however, within our reach, unless the public will assist us with its bounty, is to bring the yearly expenses of the Institution within its yearly income. But this would involve the reduction of the average number of our free patients from one hundred and fourteen to fifty, and the refusal of admission to all beyond this number, who were unable to pay the cost of their maintenance.

"We doubt whether such a change of plan is desired, or will be sanctioned by our rich liberal men—and we know that the majority of the profession are of opinion that, whilst it will less adequately, than heretofore, meet the necessities of the poorer classes, it will reduce the Institution from a first-class Hospital to one of inferior grade, and materially injure its usefulness as a school of medical instruction.

"The average excess of Expenditure over the total Income, for the last five years, has been $12,165.40, and for the past year, in consequence, mainly, of the increased cost of wages and articles of consumption, $26,299.56. The number of patients treated during the same term of time in the wards, was 7,668, and of these, 1,601 only paid any sum whatever towards defraying the expenses of their maintenance, and but very few of them its full cost. During the past year the number of persons treated was 1,749, and of these 1,338 were free patients and paid nothing, whilst 361 paid board. Of the latter, however, 261 paid only a weekly board of $4.50, though the weekly average cost of each of them was $8.35. The average number of free patients during the last year has been 114, and the above table shows that the cost of maintaining an average of a little more

than half that number, namely, sixty, is equal to the entire income of the Hospital from every source within its reach, except the board of paying patients, which, as has been seen, covers only a portion of the cost of their maintenance.

"Such, in brief, is our financial condition, and such are the causes which have produced it. At no time, however, since its establishment, has the Hospital been more useful than at this moment. At no time have the medical and surgical claims upon it been so urgent or so likely to increase as now. The rapid growth of the City and its neighborhood, the additional burden thrown upon the poorer classes by the enhanced cost of living, and the multiplication of cases of disease and disability among our discharged citizen soldiers, inevitably tend to augment greatly the number of those who can only find relief in an establishment of this sort, and fully justify the conviction that this time-honored Institution should be adequately supported by the public, and its means of usefulness kept up to its past standard, and if possible, largely increased."

The communication on cholera in the present number will be read with great interest, both on account of the age and eminence of its author and the character of the views it upholds, differing as they do from those of nearly all men of science at the present day. Our readers have been informed from time to time through our pages of the change which has taken place in the opinions of the profession in Europe respecting the communicability of this disease, and it is unnecessary to repeat here the facts upon which this change has been based. It is enough that they have been of a character to persuade many of the most conservative among them that the views they had hitherto entertained, identical with those of Dr. Bigelow, are no longer tenable. The communication, however, avoids the conclusion to which they lead by treating them as not worthy of credence. Even if this were the case, and nothing whatever had been observed in the present epidemic to directly substantiate the present belief concerning its nature, there is nothing *a priori* inconsistent with our real knowledge of this disease in the theory of its portability. Even in the accounts of its behavior and the interpretation adopted by the writer, we see nothing to which this theory is not only applicable but necessary to a solution. Whether specially under "the order of Providence" (a term in medicine apparently synonymous with undiscovered laws) or not, cholera travels, and must obey physical laws. It goes as smallpox goes, where man goes, and no faster. No one thinks of denying the contagious nature of this latter disease, we believe, and yet how many times has it been brought from Europe "during the past eight months?"

The discussions in the French Academy and other foreign societies and medical journals are rarely based upon "sensational tales," nor can Velpeau and all the eminent men in Europe and at home who believe in the communicability of cholera be regarded as "credulous and excitable persons." Neither do we consider it "sufficient to say of the supposed instances of remarkable communication or arrestation, that they are frequently interesting, being fully as dramatic as they are probable." One of these tales we cannot refrain from again

narrating, and in the words of Dr. Edwin Lankester, F.R.S., whose character for science and reliability cannot be called in question or lightly treated.

"In the year 1854 the cholera ravaged the metropolis. Up to Aug. 31st of that year not more than thirty cases had occurred in the parish of St. James, Westminster. On that night upwards of 100 cases of cholera occurred in the neighborhood of Broad St., and more than one half died. The next day the disease increased, and for four days it went on. Never was such mourning and desolation known in London since the days of the great plague. Upwards of 600 persons were killed in those five days. What could be the cause of this terrible outbreak? At first all was confusion. In the midst of the plague the late Dr. Snow accused the pump in Broad Street. It was shut up, and the plague ceased. After this event the Vestry appointed a committee to investigate the subject. On that committee were Dr. Snow, Dr. King, Mr. Marshall, the Rev. Mr. Whitehead, myself and others. We investigated the whole attack from house to house. At last the fact became only too evident, that wherever water had been drunk from the pump in Broad Street between the 31st of August and the 4th of September, there cholera had been the result. The pump was afterwards examined, and it was found that the well communicated with a cess-pool in an adjoining house. No evidence can be more convincing than that brought forward by this committee, that the impure water of this pump was the active cause of the outbreak of cholera."

There are other points in this interesting communication on which we differ from the writer, and to which we would like to allude at length, but we will only add to the closing aphorisms that we should not consider the cramps of cholera as a part of euthanasy, and that smallpox and scarlet fever have lost none of their terrors on familiar acquaintance.

Army Itch.—Several communications have lately appeared in the columns of some of our exchanges concerning the so-called army-itch, and much has been written about its being an unknown disease and "defying nomenclature and classification." We have examined a great many cases in returned soldiers and their families, and do not hesitate to express the opinion that it is simply scabies, that it is always caused by the ordinary itch insect, and that it readily yields to proper external treatment.

Massachusetts Medical College.—The Annual Commencement for the conferring of medical degrees will take place at the College on Wednesday, March 7th. The exercises will commence at 11½ o'clock, A.M., with a prayer by President Thomas Hill, D.D., after which graduates will read selections from their dissertations. The degrees will then be conferred by the President, and the exercises will conclude with an address by Prof. D. H. Storer.

The Corporation and Board of Overseers of the University will be present on the occasion, and the Fellows of the Massachusetts Medi-

cal Society, all medical students, and all persons who may be interested in medical science, are hereby respectfully invited to be present.

GEORGE C. SHATTUCK, M.D.,
Dean of the Medical Faculty.

Wednesday, February 28, 1866.

THE announcement in the daily papers that Prof. Jeffries Wyman has resigned his connection with Harvard University is a mistake. He has accepted the Professorship of Comparative Anatomy in the Medical Department, thus transferring his valuable services to a larger and higher field of usefulness.

AT a meeting of the Boylston Medical Society of Harvard University the following award of prizes was reported by the Prize Committee:—

First Prize of forty dollars for an essay on "Reflex Paralysis," to James F. A. Adams.

Second Prize of twenty dollars for an essay on "Epidemic Cholera," to Charles P. Kemp.

THE Chicago City Hospital, which was taken possession of by the National Government during the war, and used as an ophthalmic hospital, has been restored to the City government, who have transferred it to the County, and it is hereafter to be used as a county institution, under the name of the Cook County Hospital. It is the only public hospital in a county numbering more than 200,000 people, the building is large and commodious, and the medical and surgical board is composed of well-known and able members of the profession in Chicago. There can be no doubt, therefore, of its being well filled and accomplishing great good.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, FEBRUARY 24th, 1866.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	42	34	76
Ave. mortality of corresponding weeks for ten years, 1856—1866	41.0	39.4	80.4
Average corrected to increased population - - - - -	00	00	87.58
Death of persons above 90 - - - - - - -		0	0

COMMUNICATIONS RECEIVED.—Ergot in Puerperal Convulsions.

PAMPHLETS RECEIVED.—Reports of the Directors and Superintendent of the Washingtonian Home, Boston, for the year 1865.—Eleventh Annual Report of the Board of Trustees and Officers of the Southern Ohio Lunatic Asylum.

DIED,—At Lynn, Feb. 27th, Dr. Abraham Gould, aged 69 years.

DEATHS IN BOSTON for the week ending Saturday noon, February 24th, 76. Males, 42—Females, 34. Accident, 3—apoplexy, 1—asthma, 1—congestion of the brain, 1—disease of the brain, 3—bronchitis, 1—cancer, 1—cerebro-spinal meningitis, 1—consumption, 21—convulsions, 2—cystitis, 1—debility, 1—diphtheria, 4—dropsy, 2—dropsy of the brain, 3—drowned, 1—typhoid fever, 2—disease of the heart, 5—infantile disease, 2—insanity, 1—intussusception, 1—disease of the kidneys, 2—inflammation of the lungs, 6—marasmus, 2—measles, 1—old age, 2—paralysis, 1—premature birth, 2—puerperal disease, 1—smallpox, 1—unknown, 1.

Under 5 years of age, 22—between 5 and 20 years, 8—between 20 and 40 years, 24—between 40 and 60 years, 11—above 60 years, 11. Born in the United States, 47—Ireland, 22—other places, 7.